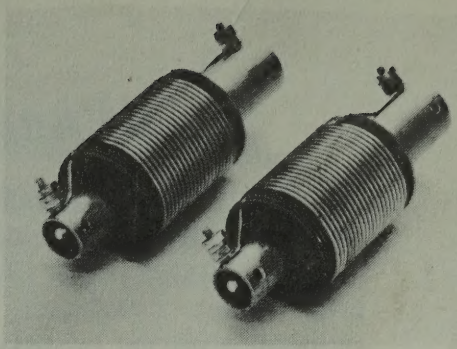
"the OLD™ RELIABLE"

REYCO



MULTIBAND ANTENNA COILS

MODEL	RESONANCE
KW-40	40M (7.150 MHz)
KW-20	20M (14.175 MHz)
KW-15	15M (21.275 MHz)
KW-10	10M (28.675 MHz)

SPECIFICATIONS

POWER	2 KW PEP (minimum)
WEIGHT	6 ounces (max.) PER COIL
SIZE	1.8" dia. (max.) × 5.5" long (max.)
ABSORPTION	WATERPROOF COATING, Clear Acrylic Lacquer
Strength	800# (min.) TENSILE STRENGTH
CORROSION	All metals aluminum, including screws, nuts, washers to resist interface corrosion
HI-Q	OPTIMUM FORM FACTOR ON POLY

KW-40 These coils are the standard five band coils to provide operation on 10-15-20-40 and 80 with an approx. length of 108 feet.

KW-10 15 20 Coils resonant in designated bands to provide perfect dipoles in each band. Using these coils together with a pair of KW-40 coils five band operation can be obtained with a total length between 85 and 95 feet.

MFC UNADILLA/REYCO DIVISION
MICROWAVE FILTER CO., INC.
6743 KINNE ST. E. SYRACUSE N.Y. 13057

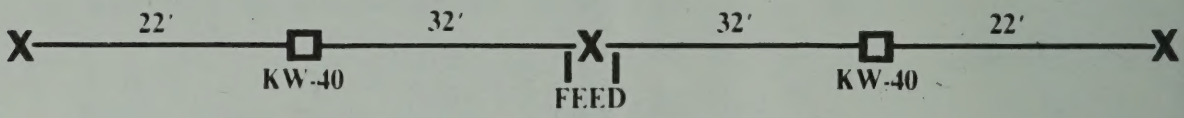
TO PLACE AN ORDER
Dial TOLL-FREE
US 1-800-448-1666
IN NYS, CALL COLLECT
315-437-3953
TWX 710-541-0493

What They Are

REYCO Coils are actually parallel coil-condenser combinations designed to resonate in the various Amateur bands. The condensers are made of aluminum tubing and polystyrene, completely sealed against moisture. The moistureproofing process together with the close fit of the parts, insure high tensile strength.

Coils are wound with aluminum wire on threaded polystyrene forms. Ratio of length to diameter plus low loss material results in a High Q assembly. Because of the high Q and impedance at resonance, the coils act as effective insulators in the band in which they are resonant.

USING THE KW-40 COILS AS A FIVE BAND ANTENNA
APPROXIMATE ANTENNA DIMENSIONS



Dimensions Given Are Wire Lengths. X—Denotes Insulator

On 40 meters the two 32 foot lengths provide a conventional dipole with the resonant coils acting as insulators.

On 75 meters the coils act as loading inductance and with the extra 22 foot lengths form a dipole on 75 meters.

On the higher frequencies, with the values chosen the antenna is 3/2 waves on 20, 5/2 waves on 15 and 7/2 waves on 10.

METHOD OF FEEDING ANTENNA USING KW-40 COILS

For transmitters with link coupling, the twin lead may be fed directly to the link.

For transmitters with unbalanced output, twin lead from antenna to a balun, coax from balun to transmitter is recommended.

Excellent results are being obtained feeding this antenna directly with 72 or 52 ohm coax.

Operation on 75 and 40 has been satisfactory with random feed line lengths. However on the high frequency bands it appears that certain lengths will improve operation.

For Coax use: 40, 83, 109 or 130 feet

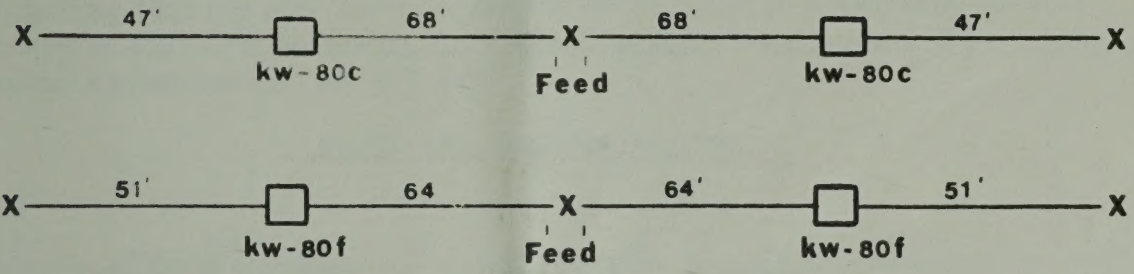
For Twin Lead use: 70, 96, 108 or 128 feet
(Use 70 ft. if possible)

KW - 80 ADDENDUM INSTRUCTION SHEET

KW 80 REYCO COILS COME IN TWO MODELS.
KW 80C covers the CW Band (3.625 MHz)
KW 80F covers the Fone Band (3.875 MHz)

KW 80 REYCO COILS PERMIT USE OF ONE ANTENNA ON BOTH 80 AND 160 METERS

APPROXIMATE ANTENNA DIMENSIONS



Dimensions are wire lengths X denotes insulator

METHOD OF FEEDING ANTENNA USING KW-80 REYCO COILS

Use either 52 or 72 ohm coax.

Feedline length with this antenna is not critical. Random lengths may be used.

INSTALLATION OF KW-80 REYCO COILS

Insert wire thru eye bolt and serve back on itself as you would an end insulator. Connect wire to a screw which is not holding a coil wire in place. For inverted V antennas, coils should be installed with larger diameter openings higher than smaller diameter openings. If antenna is horizontal, install coils in either direction.

If you intend using **other** KW models (-10,-15,-20,-40) in the same antenna with your KW-80 - call us for advised wire lengths.

TOLL-FREE 1-800-448-1666
N.Y.S. (Collect) 315-437-3953

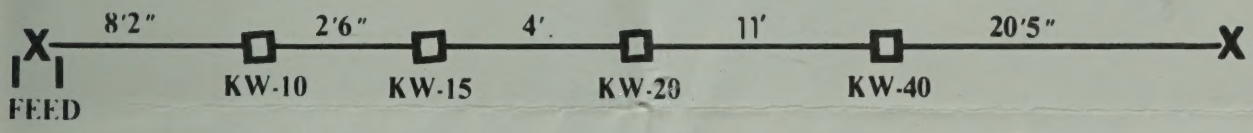
USING SEPARATE COILS FOR EACH BAND

While the KW-40 coils function as a five band antenna, we recognize that they are sometimes a compromise on 10, 15 and 20 meters. Adjusting wire lengths for optimum operation on 40 and 75 may make one or more of the high frequency bands unsatisfactory.

By adding three additional sets of traps resonant at 10, 15 and 20 meters, it is possible to have a perfect dipole on each band. It is not necessary, of course, to use four sets of traps. For example, if you do not care to operate 10 meters, the KW-10 coils may be left out and the center section cut for 15 meters. Another example: if operation on 75 is not required, insulators may be used in place of the KW-40 coils, in which case the antenna will provide dipoles for 10-15-20 and 40 meters.

Recognizing that the coils act as insulators on the band in which they are resonant and as loading coils for the next lower frequency bands, you will see that a number of combinations are possible.

ANTENNA DIMENSIONS



One Half of Antenna Shown. Other Half Same Dimensions.
Dimensions Shown Are Wire Lengths. X Denotes Insulator.

The figures given above are used at our Rochester location with the antenna approx. 35 feet high and in the clear. Resonant frequencies were at 28.8, 21.3, 14.25, 7.2 and 3.8 mc.

Final dimensions should be determined at your location using an SWR bridge.

Starting at the highest frequency band, measure to find the point of min. SWR which will indicate the resonant frequency. If this point is at or near your favorite operating spot, follow the same procedure on the next lower frequency band.

If the resonant frequency is too high, increase length of the center section a little at a time until the minimum SWR is at the desired operating point.

If the resonant point is too low, decrease the length of the center section until minimum SWR comes at the required point.

Follow the same procedure on each band working from the high toward the low frequency bands, adjusting wire lengths between coils.

Feedline length with this antenna is not critical. Random lengths may be used.

INSTALLATION OF REYCO COILS

Use wire lengths given in sketches as starting points and allow a little extra wire so that final adjustments may be made. Insert wire thru holes and serve back on itself as you would with an insulator. Connect wire to screw for electrical contact. After all wire lengths have been determined we suggest that each connection be given a coat of clear Krylon to prevent corrosion. For inverted V antennas, coils should be installed with larger diameter end higher than smaller diameter end. If antenna is horizontal, install coils in either direction.

WHEN WIRING FINAL, SPRAY THIS AREA WITH CLEAR KRYLON
INSERT WIRE THRU HOLES
WRAP RETURNED WIRE AND EXIT FROM WRAP TO SCREW FOR POSITIVE CONTACT

STANDARD WARRANTY

Every REYCO Antenna Coil is thoroughly tested electrically and mechanically before shipment. They are completely waterproofed and NO OTHER TREATMENT SHOULD BE ATTEMPTED.

We will replace any pair of coils which under normal installation use and service disclose any mechanical or electrical defects provided BOTH coils are returned to us intact for our examination; with all transportation charges prepaid to our factory within ninety (90) days of sale to original purchaser, and provided that such examination discloses in our judgment that they are defective.

Immediately upon receipt we will ship new coil replacements (if found within warranty) or we will state the cost of restoration to original condition.